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ATTENTION: Chief, IR

SUBJECT: ~~Transcript of Paper on Impact of the Chinese Communist Air Power on the Economy of Tibet~~

1. The attached paper on the ~~Impact of the Chinese Communist Air Power on the Economy of Communist China~~ has been prepared in response to your request.

2. This study is an objective, quantitative estimate of the impact of the economy of Communist China that would result from Chinese Communist activity in Tibet under the assumptions provided to this Office. Requirements for the Tibetan activity have been measured against the Chinese Communist total supply position of trucks, fuel, petroleum -- those items that are used jointly by the military and civilian sectors of the economy.

3. A sustained resistance of the magnitude envisaged would, of course, result in other effects not quantitatively measurable on the basis of the given assumptions. These would stem from the destruction of trucks, portions of roads, bridges, and material by resistance forces, and from the diversion of a large portion of the military air transport capability from normal deployment elsewhere in order to support of increased military activity in Tibet.

4. We recognize that augmented military activity in Tibet can have very real and very important benefits to United States' interests. There are, for instance, the political and psychological gains that flow from the continuous branding of the Chinese Communists as aggressors, not only in the eyes of world opinion generally, but also, and more particularly, in the eyes of the governments of the countries of South and Southeast Asia.

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SUBJECT: Transmittal of Paper on Impact of the Tibetan Campaign on the Economy of Communist China

5. With respect to Communist China's economy per se, however, we feel that the Tibetan activity, under the assumptions given, will not have a significant impact, even though reallocations of equipment and supplies would, of course, be required.

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OTTO E. GUINE  
Assistant Director  
Research and Reports

Enclosure:  
Subject paper.

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INFORMATION REPORT  
CHINA

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CHINA

IMPACT OF THE TIBETAN CAMPAIGN ON THE ECONOMY  
OF COMMUNIST CHINA

1 February 1960

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The Chinese Communist military forces, numbering about 128,000 men currently deployed in the Tibet Military District, need some 514 tons per day to meet their military supply requirements. There is ample capacity on the roads leading to Tibet to supply this requirement, and only small amounts of such supplies are believed currently to be transported by aircraft.

If, at the end of 1960, military activity in Tibet requires that the daily supply requirement be increased by 100 percent, or to approximately 1,028 tons per day, the roads available for the supply movements will not have sufficient military capacity to supply the size force currently deployed there. If, however, a modest airlift of supplies is undertaken, forces currently deployed can be supplied and there will be sufficient transport capacity by road and by airlift to supply an additional 19,000 troops. Using the currently available roads and an airlift with existing Chinese Communist military air transports, the maximum tonnage that can be delivered to the military forces in Tibet is 1,175 tons per day.

The principal items used jointly by the military and civilian sectors of the economy which are employed in the Tibet campaign and must be supplied from China, are trucks, food, and petroleum. The only significant import to China from Tibet is borax.

Trucks used currently for the Tibet campaign number about 6,800, 3.4 percent of the total military and civilian truck parks in Communist China. If supply requirements are increased, 4,500 additional trucks would be needed to operate the roads at present capacity. The increased requirement for trucks would be equivalent to about three months' output of the Chinese truck industry. The total expanded requirement would be 5.7 percent of the total military and civilian trucks in China.

Food requirements for the troops stationed in Tibet run about 78,000 tons per year. Total requirements for the military and civilian population are no more than 200,000 tons, a negligible proportion of the 61 million tons of grain procured by the government during 1959. It is inconceivable, therefore, that a food requirement in Tibet would impinge significantly on the total food supplies available to China.

The military requirement for petroleum in Tibet at the current annual rate of expenditure represents only 2.7 percent of the 1959 availability of petroleum products in China. If military activity increases, however, military petroleum requirements will probably increase to 390,000 tons per year and would represent about 4.4 percent of the 1960

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availability of petroleum products. The most critical item under the expanded assumption will be aviation gasoline, the requirement for which would increase to 17 percent of the 1960 total availability of aviation gasoline.

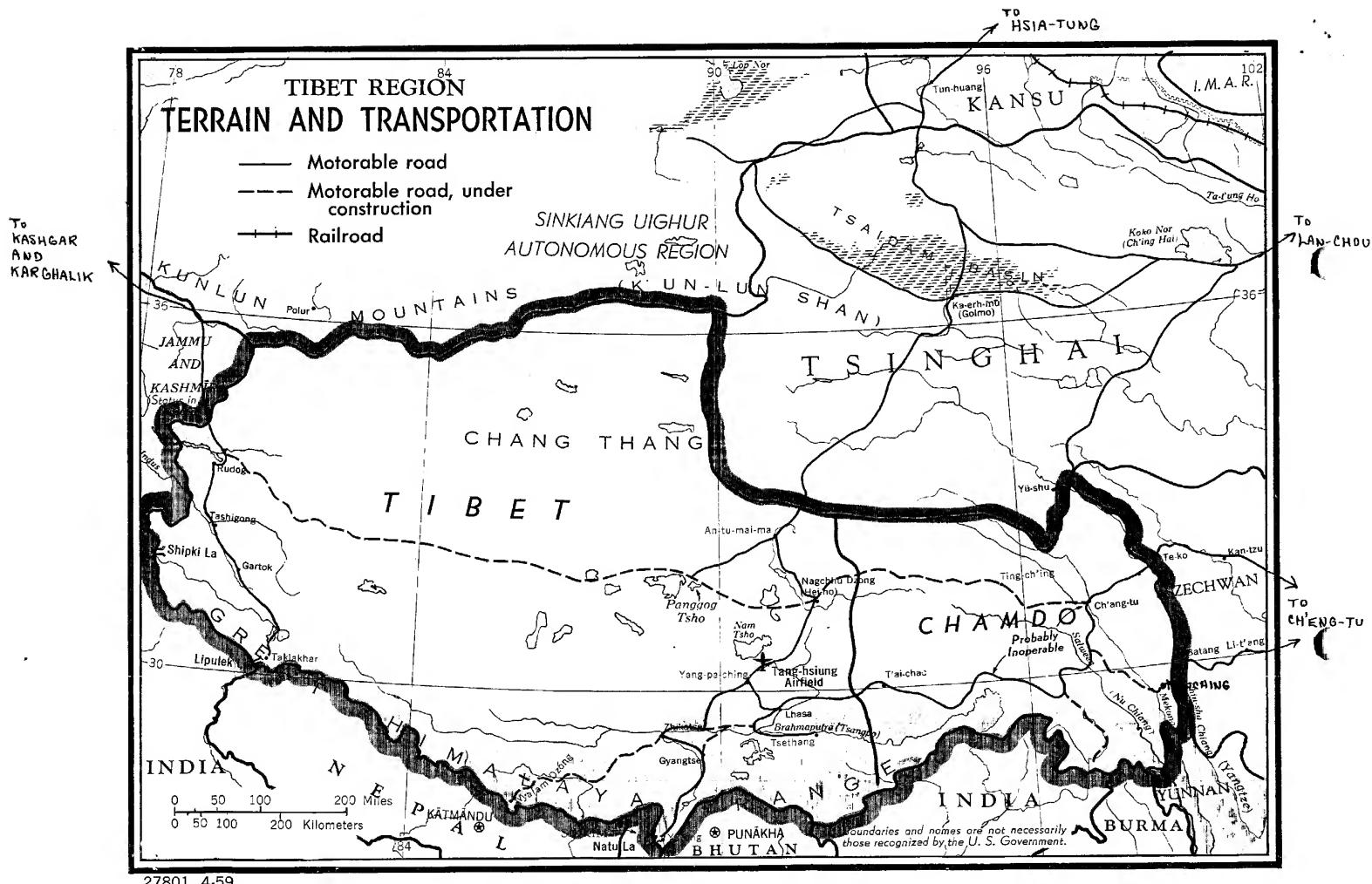
Much greater economic effort is required to support troops in Tibet than would be required to support the same troops in most other areas of China. These additional economic efforts - including the stockpiling of supplies - reduce the number of trucks, the amount of food, petroleum, and other items available for use elsewhere or for export. The requirements are small, however, in terms of the total supply position in China. It must be concluded, therefore, that the current and potential military activity in Tibet has and potentially will have only a modest if not almost negligible impact on the economy of Communist China.

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I. Overland Supply of Troops in TibetA. Troop Dispositions in Tibet

Chinese Communist Combat forces in the Tibet Military Region are presently divided into two major groups. One group is concentrated in the general vicinity of Lhasa and the other in the area around Ch'ang-tu in eastern Tibet. The Chinese have been forced to divide their forces in this manner because the road between Ch'ang-tu and Lhasa has been closed by a combination of difficult terrain, unfavorable climate, and rebel activity.

1. Supply of Troops over the Tsinghai-Tibet Highway

Combat units in the Lhasa area are supplied over the Golmo-Lhasa section of the Tsinghai-Tibet highway. This 1,300 mile road originates at two points - to the east at Lan-chou and to the north (across the Tsaidam Basin) at Hsia-tung - a transfer point on the Trans-Sinkiang Railroad line. The branches from the north and east meet at Golmo on the southern edge of the Tsaidam Basin. Although both routes leading into Golmo can be utilized for logistic purposes, the branch running north to Hsia-tung appears at present to be the main supply route for the Lhasa area.

The basic capacity of the Hsia-tung - Golmo - Lhasa route is estimated at 32 trucks per hour in each direction or 960 tons each way per 10-hour day. Using only the transport vehicles organic to the infantry, artillery, and motor transport units in the area, the Chinese Communists could deliver approximately 520 tons of all classes of military supplies to Lhasa. The difference between total tonnage and tonnage delivered represents fuel consumed. The daily supply requirements of units dependent on the Hsia-tung - Golmo - Lhasa route are approximately 60 tons per 15,000 men, or a total of 360 tons per day. Thus, there is an unused capacity of 152 tons, enough to support an additional 38,000 men under assumed present daily requirements.

2. Supply of Troops over the Szechuan-Tibet Highway

Chinese Communist combat units in the Ch'ang-tu area are supplied over the Szechuan-Tibet highway. From the eastern end of the road at Ch'eng-tu, in Szechuan province, supplies must be trucked about 700 miles to Ch'ang-tu or about 500 miles to Minching. The basic capacity of the Ch'eng-tu - Ch'ang-tu section of the route is estimated at about half the capacity of the Hsia-tung - Golmo - Lhasa route, or 16 trucks

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per hour in each direction for a total of 480 tons each way per 10-hour day. In total, about 350 tons of military supplies could be delivered daily to Ch'ang-tu and Ningching, the proportion going to each destination depending on the number of troops in each area. The daily supply requirements of the troops presently in the Ch'ang-tu - Ningching area total about 140 tons per day, leaving an unused road capacity of 210 tons. This would be enough to support an additional 52,000 men under assumed present daily supply requirements. In total, the Teinghai-Tibet and the Szechuan-Tibet roads could support over 217,000 men in Tibet, if their daily requirement is calculated at 60 tons per day per 15,000 men.

3. Supply of Troops over the Sinkiang-Tibet Highway

Chinese Communist combat units stationed in the Gartok area are supplied over the Sinkiang-Tibet highway. From the nearest transport center at Kastgar (K'o-shih) supplies are trucked about 250 miles south to Karghalik (Yeh-ch'eng) which is characterized by the Communists as the northern terminal of the road. From Karghalik supplies must be moved about 750 miles south to Gartok. The capacity of the road, restricted by the Karghalik to Gartok portion, is estimated to be 3 trucks per hour in each direction, or a total of 90 tons each way per 10-hour day. In total about 50 tons of military supplies could be delivered daily to Gartok. The daily supply requirements of the 1,600 troops presently in the Gartok area total about 6.4 tons per day. The road could supply 43.6 tons per day in excess of the present troop requirement. This amount would be sufficient to support an additional 11,000 men under present conditions. However, this road is probably motorable only for about half the year. The number of troops which could be maintained in the area for a sustained length of time might thus be about half the figures quoted or about 6,000 men.

II. Increase in Supply Requirements

If it is assumed that the number and location of troops in Tibet remain static, but that their daily supply requirement is increased by 100 percent because of increased action against the Tibetan rebels, the capability of the roads serving the area would not be sufficient for supply purposes, and an airlift would have to be used. If the daily supply requirement of the troops in the Lhasa area were increased to 736 tons per day, 520 tons could be supplied by trucks using the Teinghai-Tibet highway and 216 tons by an airlift. An additional 64 tons per day could be supplied by air if the operation were maintained over an

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extended period of time. If necessary, some aircraft could be diverted to move this amount of tonnage to other airfields in Tibet. An increase in the supply requirement of troops in the Ch'ang-tu - Minching area to 280 tons per day could be handled on the Szechuan-Tibet highway, with about 70 tons to spare. No airlift would be required. In the Gartok area an increase in the supply requirement to 13 tons per day would not tax the capability of the Sinkiang-Tibet highway over which an additional 37 tons per day could be delivered during that period of the year in which the road is operable.

### III. Supply of Troops in Tibet by Airlift

The Chinese Communist Air Force is estimated to have 30 C-46's, 100 Li-2's, 35 Il-14's, 5 Il-12's, 4 Il-18's and a number of smaller aircraft at present which might be suitable for forward area operation and airdrops. In addition, an estimated 20 TU-4 bomber aircraft owned by China also have been converted to transport use. The lift capacity of the aircraft varies, of course, with the distance required to be flown. Airfields at Ch'eng-tu, Hsi-ning, Lan-chou and Sian are the ones most likely to be used for an airlift operation into Tibet. The average distance from these fields to the field for Lhase is about 780 nautical miles (1,450 kilometers) or about 1,560 nautical miles for the round trip.

If the entire present park of transport aircraft in the Chinese Communist Air Force is treated as a unit, its lift capability, at one trip per aircraft, to Tibet is approximately 780 short tons for the piston engine aircraft which consume aviation gasoline and 60 short tons for the four IL-18's which consume kerosene. If an airlift operation involving all existing military transport in the Chinese Air Force is mounted, and each aircraft operates 15 times per month a total of 11,700 short tons of supplies could be moved to Tibet per month or an average of 390 short tons per day by the piston engine transports and 900 short tons per month or 30 short tons average per day by the IL-18's for a total of 12,600 short tons per month or 420 short tons per average day.

The above estimated capacity operation would be difficult to maintain over an extended period of time, because of maintenance and requirements for military transport aircraft elsewhere in China. Moreover, ground support equipment and supplies would also have to be transported to Tibet in order to sustain the airlift. Therefore, it is more reasonable to assume that each of the transport aircraft would not be used more often than every third day or ten times per month. If this is the case, a total of 7,800 short tons of supplies could be moved to Tibet per month or 260 short tons per

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day by the piston engine transports and 600 short tons per month or 20 short tons per day by the IL-18s, for a total of 8,400 short tons per month or 280 short tons per day. It should be understood that the USSR now has a substantial reserve park of piston engine aircraft a part of which they might be willing, if not anxious, to export to China.

IV. Impact of the Tibetan Campaign on the Economy

A. Truck Park

Approximately 6,800 trucks are needed to supply military troops in Tibet under present conditions. Estimated truck requirements for the three logistic supply routes are: (1) Tsinghai-Tibet road - 5,717, (2) Szechuan-Tibet road - 1,052, and (3) Sinkiang-Tibet road - 72. If the number of military troops in Tibet were increased to the maximum number which could be supported by the existing roads, about 11,300 trucks would be required. Of this total 8,070 would be employed on the Tsinghai-Tibet road, 2,640 on the Szechuan-Tibet road, and about 600 on the Sinkiang-Tibet road. At the end of 1959 there were probably more than 200,000 trucks in Communist China, about equally divided into military and civilian truck parks.

It is estimated that more than 11,300 military trucks (the number needed to operate the three roads at maximum capabilities) are available in the three military regions of Tibet, Lan-chou (Kansu, Tsinghai, Shensi) and Sinkiang. In addition, there are an unknown number of trucks assigned to quasi-military units, particularly in Sinkiang, which could be made available if the Chinese Communists were willing to impair the progress on economic projects which these trucks support.

The trucks organic to infantry regimental combat teams and other miscellaneous units are probably engaged to the extent possible over the poor roads in local supply operations and shifting troops from place to place in response to local tactical situations. If these trucks were made available in any great numbers for a long distance supply operation, the mobility of the units to which they are normally assigned would be considerably curtailed. The number of military trucks in the immediate area that could be made available without impairing other military needs, therefore, would be only those assigned to motor transport units. It is assumed that there are currently enough motor transport regiment trucks available to provide the necessary long-distance logistic support under present assumed supply requirements.

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The Chinese People's Army has more trucks than it has priority needs for trucks elsewhere in China, even recognizing such priority areas as the Fukien Coastal area and the Manchuria-North Korea border. If additional forces were deployed in Tibet, it is believed they would not only bring their organic motor transport with them but also would be accompanied by independent motor transport units. It is therefore concluded that by diverting trucks from normal garrison duties in the eastern and central parts of the country, sufficient additional trucks could be made available from the military park to operate the three roads at maximum capabilities.

At least 15,000 civilian trucks are employed for economic activities in the provinces of Kansu, Sinkiang, and Tsinghai. Truck transportation is important to the economic activities of these provinces because of the absence of other forms of modern transport and the long-distances over which freight must be hauled. These civilian trucks could be diverted from their current use only if the Chinese Communists were willing to reduce the scale of economic activity. If civilian trucks were used in Tibet, they would likely be drawn from eastern portions of the country where primitive transport could be used to compensate partially for them. We do not believe, however, that civilian trucks would be diverted to support military action in Tibet.

Thus, we believe that the Chinese Communists are capable of providing the additional 4,500 trucks necessary to utilize the three logistic roads into Tibet to full capabilities. These trucks would probably be made available from the military park. If, however, the trucks were drawn from the civilian park, they would probably come from the eastern portions of China. The 6,800 trucks presently needed would be about 3.4 percent of the total of 200,000 trucks (military and civilian) in Communist China. The 11,300 trucks necessary to operate the three logistic routes at maximum capability would be about 5.7 percent of the total Chinese truck park, or between 11 and 12 percent of the military truck park. The difference between the number of trucks currently employed and the maximum number which could be employed (4,500 trucks) is the equivalent of about 3 months' output from the Chinese Communist truck industry.

B. Petroleum

At present, the military forces in Tibet are consuming petroleum at annual rate of nearly 200,000 tons. If total military supply requirements

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were doubled, resulting in capacity or near capacity use of the roads and in a supplementary airlift, the military forces would consume petroleum at an annual rate of nearly 390,000 tons.

Total availability of petroleum products in Communist China, from domestic production and imports, was 7.3 million tons in 1959. The 1960 figure will probably be about 8.8 million tons. At present, the military requirement for petroleum in Tibet on an annual basis, is about equal to 2.7 percent of national availability in 1959. If total military supply requirements were doubled, the annual military requirement for petroleum in Tibet would be equal to about 4.4 percent of national availability in 1960. Of the 7.3 million tons available in 1959 about 617,000 tons were aviation fuel. If the Tibet operation is increased to the extent that aircraft are used to supplement road transport, fuel requirements for operations of the transport aircraft would be some 102,000 tons. This tonnage would represent 17 percent of the aviation fuel available in 1960, assuming that 1960 imports are about equal to those of 1959. The actual availability of aviation fuel in 1960, however, will depend upon the demand for it as it is nearly all imported.

It is believed that petroleum for Tibet is supplied from the refineries at Yu-men, Lan-chou, and Leng-hu in the Tsaidam Basin. In 1959 these three refineries produced 762,000 tons of gasoline and diesel fuel. The estimated military requirements for Tibet were about 26 percent of this production.

#### C. Food

The population of Tibet was 1.27 million according to the latest Communist Chinese statement. Tibet has traditionally produced almost all the food and clothing requirements of the Tibetan people. Some of the population are Chinese, however, and more Chinese workers have been brought in for the borax and other industries and to construct and repair roads. Food requirement for the troops stationed in Tibet is about 70,000 tons per year. At the outside the present amount of food needed from the Chinese economy to support the Chinese in Tibet may be as much as 200,000 tons per year. This is a negligible proportion of the 61 million tons of grain that the Chinese government collected during 1959 for distribution to the urban population, to the military, for export, and for redistribution to rural areas. Even if the food requirements for the Chinese civilians in Tibet are doubled, total imports of food into Tibet would not exceed

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300,000 tons per year. Grain collected in Communist China is expected to increase by 3 million tons in 1960. If the revolt in Tibet should disrupt local production of food, however, it is conceivable that food imports might have to be increased in order to prevent starvation among the Tibetans.

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